Remarks/Arguments

By this Amendment, Applicants have amended claims 1, 24 and 26. Claims 1-28 are pending. Applicants have also amended Figure 2B and Figure 9.

Drawing Objections

The drawings are objected to for failing to comply with 37 CFC 1.84(p)(4) for reasons set forth in numbered paragraphs 1 and 2 of the Office Action. Applicants have amended the Specification and Figure 9 to overcome the basis for these drawing objections. Applicants respectfully submit that the amendment to the Specification and the drawings are not the addition of new matter.

The Examiner has objected to Figure 1 because the reference characters "11" and "13" are "used to designate substrate narrow portion." Applicants believe that the Examiner may have confused the substrate 11 and the groove 13c. Reference numerals 11 and 13c correctly designate the substrate and groove, respectively, in Figure 1. But to more clearly identify these elements of the subject Application, Applicants are proposing an amendment to the Specification at page 5 so that one reading the subject Application will also look to Figures 1, 9 and 10 with respect to substrate 11, and thereby more clearly understand the relationship between the substrate 11 and the groove 13c.

The Examiner has also objected to Figures 1 and 4(a) because the reference characters "16, 15" and "11b, 11c" are "used to designate terminals/end." Applicants believe that the Examiner does not understand that 11b and 11c designate the ends of the substrate 11, and that terminals 15 and 16 of the circuit protector include the conductive layer 12. To more clearly explain the foregoing, Applicants are amending Figure 9 to more clearly show the difference between the ends 11b and 11c of the substrate 11, and the terminals 15 and 16 of the circuit protector.

Applicants contend that the foregoing amendments to the drawings and the Specification are not the addition of new matter, but merely provide in a more clear fashion that which was disclosed in the originally filed Specification. Applicants request that the drawing objections be withdrawn.

Claim Rejections Under Section 112

Claims 1-28 stand rejected under 35 USC §112, second paragraph, as being indefinite for reasons set forth in numbered paragraphs 5-7 of the Office Action. The Applicants have now amended claim 1 and claims 24 and 26 to overcome the basis for this Section 112, second paragraph rejection.

Applicants have amended claim 1 so as to more clearly and positively define Applicants' claimed invention. The amendment to claim 1 is not the addition of new matter. Claim 1 is also now in the form of one sentence. As amended, claim 1 more clearly defines the inventive circuit protector described in the subject application.

Applicants have also amended claims 24 and 26 by changing "fusing portion" to "fusing section." Applicants submit that this is not the addition of new matter, but is based on the Application as originally filed. In this connection, Applicants direct the Examiner to the discussion found in the Specification at page 1, line 26 to page 2, line 20, as well as the discussion found at page 5, lines 17-21, which would be clearly understood by one skilled in the art as explaining what is meant by "fusing section" as found in claims 24-28. Specifically, such feature is used for the purpose of heat dissipation for the control of fusing current.

Based on the foregoing discussion and the amendments to the claims, Applicants respectfully submit that all claims are in full compliance with Section 112. Applicants request that the Section 112 rejection be withdrawn.

Claims Rejections Under Section 102 and 103

Claims 1-6, 9, 10, 14-16, and 18-28 stand rejected under 35 USC §102(b) as being anticipated by Applicants' Prior Art-Figure 2 ("APA") or JPO 2001023502A ("Japanese Reference), and claims 7, 8, 11-13, and 17 stand rejected under 35 USC §103(a) as being unpatentable over APA or the Japanese Reference. Applicants respectfully traverse the Section 102(b) and the Section 103(a) rejections.

Applicants contend that all the features of independent claim 1 are disclosed in the priority documents 2000-397685 and 2000-397686. Both of these priority documents have a priority date of December 27, 2000 which is before the publication date of the Japanese reference (JP 2001-023502A) which is January 26, 2001. Applicants are therefore preparing certified English translations of these priority documents thereby to eliminate the Japanese Reference as a prior art reference. The translations will be provided under separate cover.

The Office Action has also indicated that the above identified claims are anticipated or obvious in view of the APA, which is Figure 2B. Applicants, however, have amended the Specification by indicating that Figure 2B is not prior art. Applicants had, inadvertently, identified Figure 2B as prior art in a Response to Restriction Requirement and Preliminary Amendment dated August 11, 2003.

Applicants designating Figure 2B as "Prior Art" was done by mistake. Applicants contend that both Figures 2A and 2B are embodiments of Applicants' claimed invention since both of these Figures show a circuit protector which can be part of the circuit protector defined by Applicants' claimed invention. That is to say, both of the circuit protectors shown in Figures 2A and 2B can incorporate Applicants' claimed invention which includes the feature of a substrate having a pore area of 1-30% per unit surface area of the surface of the substrate. In emphasizing the invention of Figure 2A, Applicants mistakenly identified Figure 2B as "Prior Art," when in fact it is not prior art.

An inventive feature of Applicants' claimed invention is that the substrate has a pore area of 1-30% per unit surface area. Applicants use the pores of the pore area for control of heat dissipation of the circuit protector as explained in the application. Applicants have found the usefulness of the pores in this heat dissipation problem which has not heretofore been appreciated by those skilled in the art. Conventional ceramic wares, such as china, will have pores. But these pores are typically glazed over so that the effect of the pores is non-existent. In the electronic industry, a ceramic substrate conventionally does not have surface pores because if surface pores exist, they will connect to internal pores, and the substrate can not have sufficient surface resistivity. One reason for this is that the substrate absorbs moisture within the pores under high humidity conditions and another reason is that a conductive material that would be formed on a surface of the substrate often penetrates into the body through the pores.

But Applicants have realized and have used in a positive manner the surface pores in the electronic substrate for elimination of the heat dissipation problem, wherein conventionally no surface pores would be formed in a ceramic substrate used in the electronic industry. Thus a feature of Applicants' claimed invention is the substrate having a pore area of 1-30% per unit surface area of the surface of the substrate and the surface pores of the electronic substrate are used by Applicants to control heat dissipation of the circuit protector. Moreover, Applicants specifically control the amount of the surface pores. Thus when the Office Action refers to surface pores being "inherent," it is with the mistaken understanding that such surface pores are commonplace in an electronics substrate, when in fact they are not for the reasons stated above.

In emphasizing this novel feature of Applicants' claimed invention, Applicants mistakenly looked at Figure 2B as "prior art" when in fact the figure shown in Figure 2B incorporating Applicants' claimed invention is not prior art and is in fact an embodiment of Applicants' claimed circuit protector.

Independent claim 24 and the claims dependent thereon are not directly addressed in the Section 102 and Section 103 rejections. Applicants contend that the invention claimed thereby is in condition for allowance because claim 24 defines an invention not taught or suggested in the prior art.

With the elimination of Figure 2B and the Japanese reference as prior art, Applicants respectfully submit that there is no basis for the Section 102 and Section 103 rejections. Applicants therefore request that the Section 102 and Section 103 rejections be withdrawn.

Based on the foregoing remarks and amendments, Applicants respectfully submit that claims 1-28 are in condition for allowance. Reconsideration and allowance of all pending claims are respectfully requested.

Respectfully submitted,

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DNC/kc/ds

Attachment: Figures 2B and 9 (2 sheets)

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